

## CLAIMS

1. A method of testing a pair of thin films, each thin film being formed by a material desired for use as a different one of a pair of contact materials, to obtain information that is usable in a determination whether at least one of the pair of contact materials is appropriate for use as a contact material in a switch, comprising:

performing at least one atomic force microscopy measurement relating to a predetermined characteristic of the pair of contact materials on the pair of thin films after they contact each other with a first controlled force.

2. The method according to claim 1 wherein:

the predetermined characteristic is a contact resistance;  
and

the step of performing the atomic force microscopy measurement comprises obtaining a contact resistance value between the pair of thin films when the pair of thin films contact other with the first controlled force.

3. The method according to claim 1 wherein:

the predetermined characteristic is a current-dependent stiction force; and

the step of performing the atomic force microscopy measurement comprises obtaining a stiction force value between the pair of thin films after the pair of thin films contact other with the first controlled force between the thin films.

4. The method according to claim 1 wherein the characteristic is whether the pair of thin films are conductors.

5. The method according to claim 1 wherein the characteristic is whether the pair of thin films are non-conducting.